

# Center-of-Gravity Analysis in COIN

A New Way to Problem-Solve

20 March 2009

U.S. Army, MIBOLC 09-001

Holly Sun

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>20 MAR 2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>Center-of-Gravity Analysis in COIN. A New Way to Problem-Solve</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>University of Military Intelligence,Fort Huachuca,Sierra Vista,AZ,85613</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>10</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

---

## Introduction

---

Poor understanding throughout the Army on how to define and exploit enemy center of gravity (COG) is driven by an outdated analytical framework still rooted in conventional thinking. This problem is two-fold in nature; first to blame is the failure of U.S. military doctrine to relate the links and nodes of COG to intelligence activities from the bottom up. The result is a gap between what is studied and what is practiced in today's counterinsurgency environment. The second part of the problem is an institutional failure by the Military Intelligence (MI) branch to refocus analytical methods to meet the demands of a complex, multi-dimensional battle space. The intelligence community writ large is slowly beginning to realize that the term 'national security' has taken on a new meaning, one that requires a fundamental change to how we conduct war. Central to this change is the complete understanding of enemy COG.

Perhaps one of the most contentious terms in the military today, *center of gravity* is the focal point upon which all United States military power converges. It represents the basic level of understanding in warfare, but remains a nebulous concept for many junior MI officers because the military branches cannot come to a consensus on what COG actually means. Yet these disagreements only muddle the issue more by highlighting the underlying flaw with the Army's approach to problem-solving: the focus on the "what" rather than the "how."

Much debate has centered on the proper role of the military in an evolving threat landscape. As conventional boundaries between war and peace, offense and defense, lethal and non-lethal, domestic and foreign, and other dichotomous concepts continue to blur, MI officers are under increasing pressure to find, fix, finish, exploit, assess and disseminate the requisite

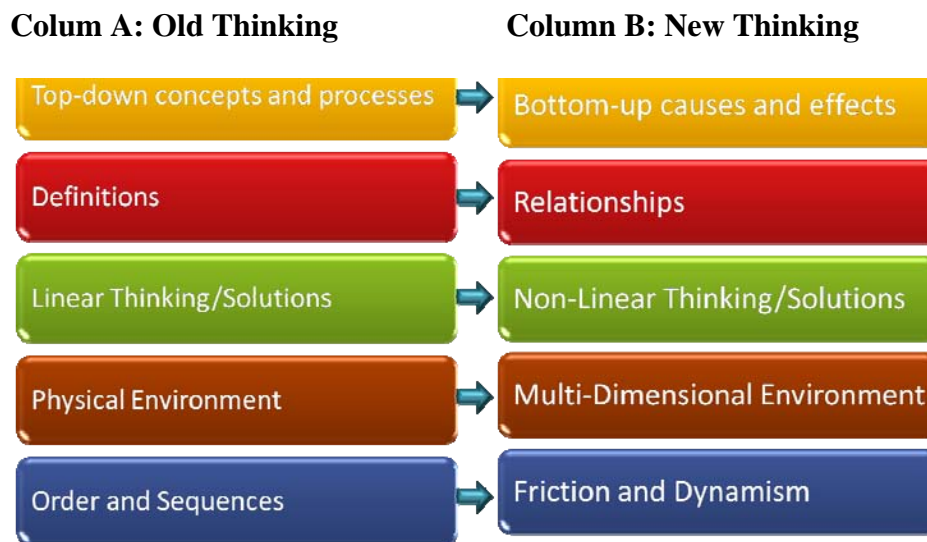
information to defeat the enemy. Equipped with outdated guidance and an incomplete tool-kit, the junior MI officer – be it the S-2, Assistant S-2, HUMINT Platoon Leader, or some other tactical-level position – must rely more on her wits and critical thinking skills in order to succeed. Herein lies a golden opportunity for improvement.

---

### **A New Operating Environment**

---

We live in an era of “persistent conflict,” the hallmark idea championed by the Army’s brightest thinkers. It is a state of converging and diverging threats, where we should expect to fight inexperienced insurgents with limited military capabilities as often as we do a well-led, fully-outfitted military force. Weapons of mass destruction and niche technologies will punctuate the balance of power, which in the near future will be distorted even more by the effects of globalization. Additionally, long-term trends of human geography, the competition for resources, and the marriage of organized crime with transnational terrorism will transform the battlefield environment and require us to think globally and act locally. Realistically, we must be prepared, even at the tactical level, to respond to and exploit threats that exist echelons above our area of responsibility because of the fluidity of this evolving environment. This approach will require moving away from the analytical metrics listed in Column A in Figure 1 and towards those in Column B.



**Figure 1. Elements from Old Thinking to New Thinking.**

This complex environment must be thoroughly understood in order to analyze the core component of our adversaries – their center of gravity. The original Clausewitzian definition refers to COG as “the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed.”<sup>1</sup> Contemporary definitions have elaborated on this hub. Army FM 3-24 *Counterinsurgency* refers to COG as “the source of power that provides moral or physical strength, freedom of action, or will to act.”<sup>2</sup> Joint Publication 3.0 modifies this definition to represent: “the set of characteristics, capabilities, and sources of power from which a system derives its moral or physical strength, freedom of action, and will to act.”<sup>3</sup> Yet the fundamental flaw remains unaddressed – definitions, capabilities and requirements provide little insight into the COG analytical process. They allude merely to *what* the enemy uses to conduct operations, not *how* he uses them.

<sup>1</sup> Carl von Clausewitz, *On War*, Abridged, Annotated., trans. Michael Howard and Peter Paret (Oxford: Oxford University Press, 2007), 242-42.

<sup>2</sup> Headquarters, Department of the Army, Field Manual 3-24, *Counterinsurgency* (Washington, DC: Government Printing Office, 13 February 2009), <<http://www.fas.org/irp/doddir/army/fm3-24.pdf>>.

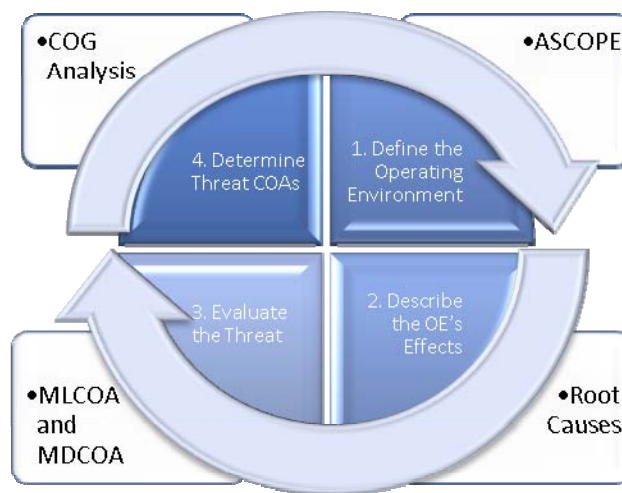
<sup>3</sup> U.S. Department of Defense, Joint Publication 3-0, *Joint Operations* (Washington, DC: Government Printing Office, 13 February 2009), <[http://www.dtic.mil/doctrine/jel/new\\_pubs/jp3\\_0.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp3_0.pdf)>.

---

## A New Approach to COG Analysis

---

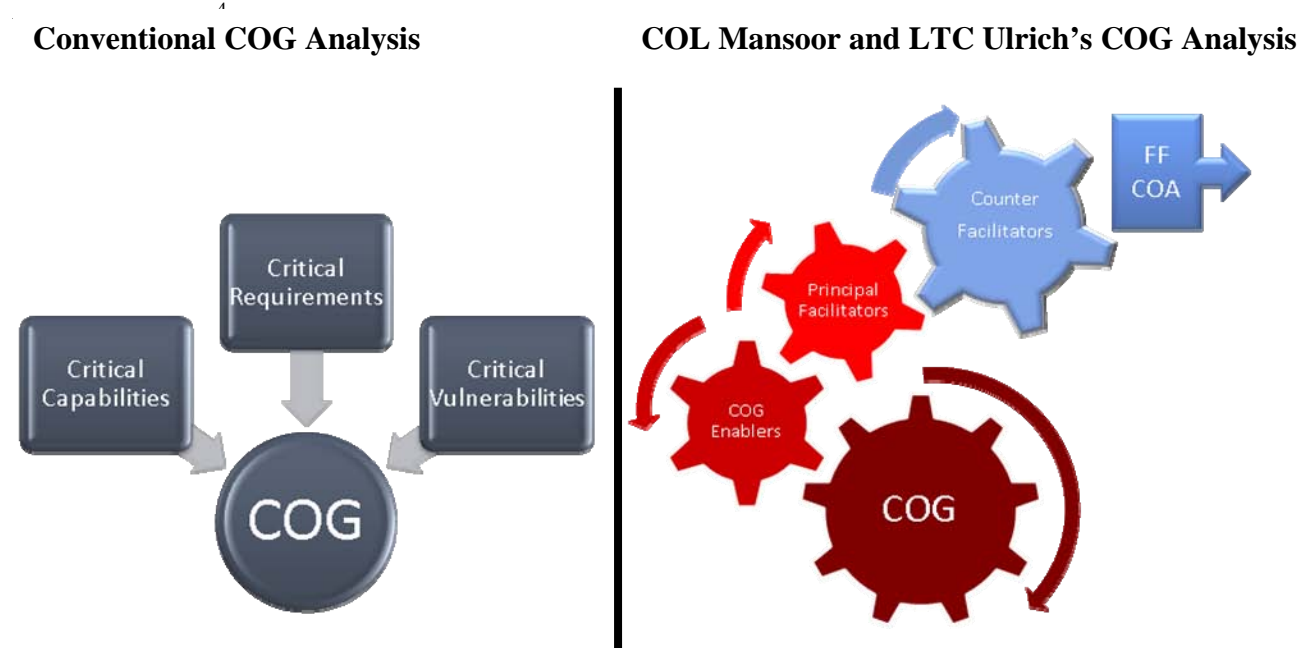
These shortfalls are addressed in an analytical framework proposed by Colonel Peter R. Mansoor (Ret.) and Lieutenant Colonel Mark S. Ulrich. Recognizing that the emphasis should be on the *relationship* between the elements within an enemy's COG, these two gentlemen incorporated COG analysis into the culminating step of a modified COIN Intelligence Preparation of the Battlefield (IPB) that focused on the people and the insurgency (see Figure 2).



**Figure 2. COG Analysis in Intelligence Preparation of the Battlefield.**

Step 1 of IPB emphasizes the people as the main collection element in the operating environment – who they are, what they value, and what they are willing to fight for and against. Step 2 dissects the root causes of the insurgency – both what initiated it and what continues to sustain it today. Step 3 examines the relationship between the insurgency and the population as it relates to the environment, providing an estimation of how the enemy will fight. Finally, step 4

assesses how the insurgents will exploit aspects and/or resources in the population to achieve



**Figure 3. Conventional COG Analysis vs. Mansoor and Ulrich's COG Analysis.**

The primary differentiating facet between the conventional COG interpretation versus that of COL Mansoor and LTC Ulrich is the focus on causal relationships between the COG components rather than the definitions. In Figure 3, *COG* represents resources or an aspect of the population that an enemy may exploit. A *COG enabler* is the official or unofficial leader or Information Operations (IO) message that allows the insurgent to exploit this COG. The *principal facilitator* is an insurgent action designed to manipulate the COG enabler(s), play upon the root cause, and exploit a vulnerability of the COG enabler. It is also the specific delivery method of the enemy's IO messages. In response to the *principal facilitator*, COIN forces can conduct what COL Mansoor and LTC Ulrich refer to as a *counter facilitator* – an action to

<sup>4</sup> Colonel Peter R. Mansoor (Ret.) and Lieutenant Colonel Mark S. Ulrich, "Linking Doctrine to Action: A New COIN Center-of-Gravity Analysis," *Military Review* (September-October 2007): 45-51

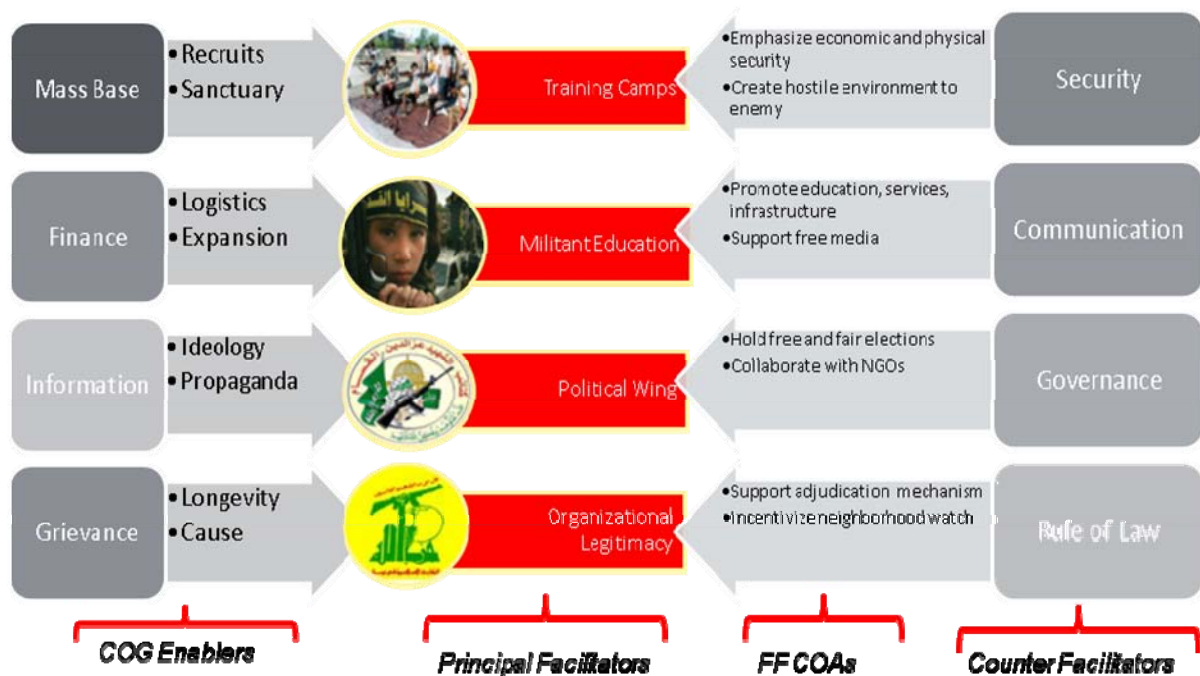
counter an enemy's attempt to coerce an enabler. This decision will ultimately determine a course of action (COA) for COIN forces.<sup>5</sup>

COL Mansoor and LTC Ulrich's analysis can be improved further by applying its framework to the hypothesis that the universal COG for any insurgent organization is its ability to regenerate cells. Depicted in Figure 4, it becomes evident what COIN forces can do to disrupt the key nodes of an enemy COG. For example, insurgents will often encourage the violence and criminal activity in any given neighborhood, using these incidents to further their argument that the current government cannot protect its people from harm. In response, COIN forces can incentivize a 'neighborhood watch' effort by hiring local citizens to patrol their community and rewarding the improved areas with financial gifts, basic goods and services. Exponentially more useful and adaptive than a compound definition, this new COG analytical tool is flexible enough to fit a variety of situations because it highlights linkages and causation, which encourages forward-thinking and anticipation of 2<sup>nd</sup> and 3<sup>rd</sup> order effects. Most importantly, it will foster innovative targeting methodology by maintaining the focus on the network itself, rather than the terrorist methods employed by the enemy.

---

<sup>5</sup> COL Mansoor and LTC Ulrich, "Linking Doctrine to Action", 48-51.





**Figure 4. Application of COG Analysis to COG Hypothesis.**

## Conclusion and Next Steps

Today's Army recognizes the criticality of addressing its doctrinal and institutional shortfalls, as evidenced by this article. As a Department of Army civilian who has been afforded the opportunity to attend the Military Intelligence Basic Officer Leadership Course, I can speak unequivocally about the top caliber of individuals seeking to rectify the problems aforementioned. Innovation and passion are in abundance within the MI community; the wildcard that remains is the execution and implementation of these ideas, continuously stifled by the bureaucratic constraints inherent in an institution that has long been resistant to change. Yet what doctrine and instructional material lack in applicability, every soldier can make up for in personal, professional development. It explains why you are reading this article, and why the

ideas promulgated by COL Mansoor and LTC Ulrich may have inspired a random S-2 downrange more than any number of field manuals he may have read previously. We have come to accept that every soldier is a sensor; we must now consider how to make every soldier an innovator. That challenge begins today.

## BIBLIOGRAPHY

Carl von Clausewitz, *On War*, Abridged, Annotated. Translated by Michael Howard and Peter Paret. Oxford: Oxford University Press, 2007.

Colonel Peter R. Mansoor (Ret.) and Lieutenant Colonel Mark S. Ulrich, "Linking Doctrine to Action: A New COIN Center-of-Gravity Analysis," *Military Review* (September-October 2007).

Headquarters, U.S. Department of the Army, Field Manual 3-24, *Counterinsurgency*. Washington, DC: Government Printing Office. <http://www.fas.org/irp/doddir/army/fm3-24.pdf> (accessed 13 February 2009).

U.S. Department of Defense, Joint Publication 3-0, *Joint Operations*. Washington, DC: Government Printing Office. [http://www.dtic.mil/doctrine/jel/new\\_pubs/jp3\\_0.pdf](http://www.dtic.mil/doctrine/jel/new_pubs/jp3_0.pdf) (accessed 13 February 2009).